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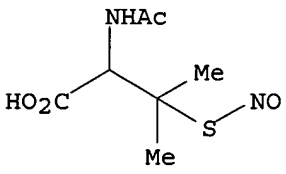
```
=> S 67776-06-1/RN

L12           1 67776-06-1/RN

=> SET NOTICE 1 DISPLAY

NOTICE SET TO 1 U.S. DOLLAR FOR DISPLAY COMMAND
SET COMMAND COMPLETED

=> D L12 SQIDE 1-

YOU HAVE REQUESTED DATA FROM 1 ANSWERS - CONTINUE? Y/(N):y
THE ESTIMATED COST FOR THIS REQUEST IS 5.63 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L12  ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   67776-06-1  REGISTRY
CN   Valine, N-acetyl-3-(nitrosothio)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   DL-Valine, N-acetyl-3-(nitrosothio)-
OTHER NAMES:
CN   N-Acetyl-S-nitroso-DL-penicillamine
CN   N-Acetyl-S-nitrosopenicillamine
CN   S-Nitroso-N-acetyl-DL-penicillamine
CN   S-Nitrosoacetylpenicillamine
CN   SNAP
CN   SNAP (amino acid)
DR   81739-40-4
MF   C7 H12 N2 O4 S
LC   STN Files:   AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS,
       CASREACT, CEN, CHEMCATS, CIN, CSCHEM, IPA, PHAR, PIRA, PROMT, TOXCENTER,
       USPAT2, USPATFULL
         (*File contains numerically searchable property data)
```




```
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

             210 REFERENCES IN FILE CA (1957 TO DATE)
               4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             210 REFERENCES IN FILE CAPLUS (1957 TO DATE)


=> SET NOTICE LOGIN DISPLAY

NOTICE SET TO OFF  FOR DISPLAY COMMAND
SET COMMAND COMPLETED

=>

=> file reg
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                               2.08      84.33

FILE 'REGISTRY' ENTERED AT 23:38:37 ON 25 JUN 2003
```

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 24 JUN 2003 HIGHEST RN 536971-45-6
DICTIONARY FILE UPDATES: 24 JUN 2003 HIGHEST RN 536971-45-6

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

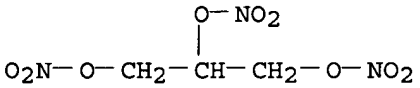
=> s sodium nitroglycerine/cn
L13 0 SODIUM NITROGLYCERINE/CN

=> s nitroglycerine/cn
L14 1 NITROGLYCERINE/CN

=> d l14

L14 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
RN 55-63-0 REGISTRY
CN 1,2,3-Propanetriol, trinitrate (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1,2,3-Propanetriyl nitrate
CN Adesitrin
CN Angibid
CN Anginine
CN Angiolingual
CN Angorin
CN Aquo-Trinitrosan
CN Blasting oil
CN Cardamist
CN Chitamite
CN Cordipatch
CN Corditrine
CN Coro-Nitro
CN Deponit
CN Diafusor
CN Discotrine
CN Epinitril
CN Gilucor
CN Gilucor nitro
CN Glonoin
CN Glycerin trinitrate
CN Glycerol nitric acid triester
CN Glycerol trinitrate
CN Glyceryl nitrate
CN Glyceryl trinitrate
CN GTN
CN Klavikordal
CN Lenitral
CN Lentonitrina
CN Millisrol

CN Minitran
CN Minitran (nitroglycerin)
CN Myoglycerin
CN NG
CN Niglin
CN Niglycon
CN Niong
CN Nitora
CN Nitrin
CN Nitrine
CN Nitrine-TDC
CN Nitro Mack
CN Nitro-Bid
CN Nitro-Dur
CN Nitro-Gesani
CN Nitro-lent
CN Nitro-PRN
CN Nitro-Span
CN Nitrocardin
CN Nitroderm
CN **Nitroglycerine**
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
FS 3D CONCORD
DR 8013-23-8, 9010-02-0, 105469-31-6, 80066-48-4, 100292-13-5
MF C3 H5 N3 O9
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6455 REFERENCES IN FILE CA (1957 TO DATE)
32 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6463 REFERENCES IN FILE CAPLUS (1957 TO DATE)
7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s sodium nitroglycerine
272955 SODIUM
1 NITROGLYCERINE
L15 0 SODIUM NITROGLYCERINE
(SODIUM(W)NITROGLYCERINE)

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	18.96	103.29

FILE 'REGISTRY' ENTERED AT 23:39:27 ON 25 JUN 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 24 JUN 2003 HIGHEST RN 536971-45-6
DICTIONARY FILE UPDATES: 24 JUN 2003 HIGHEST RN 536971-45-6

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> S 55-63-0/RN

L16 1 55-63-0/RN

=> SET NOTICE 1 DISPLAY

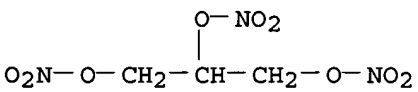
NOTICE SET TO 1 U.S. DOLLAR FOR DISPLAY COMMAND
SET COMMAND COMPLETED

=> D L16 SQIDE 1-

YOU HAVE REQUESTED DATA FROM 1 ANSWERS - CONTINUE? Y/(N):y
THE ESTIMATED COST FOR THIS REQUEST IS 5.63 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L16 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
RN **55-63-0** REGISTRY
CN 1,2,3-Propanetriol, trinitrate (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1,2,3-Propanetriyl nitrate
CN Adesitrin
CN Angibid
CN Anginine
CN Angiolingual
CN Angorin
CN Aquo-Trinitrosan
CN Blasting oil
CN Cardamist
CN Chitamite
CN Cordipatch
CN Corditrine
CN Coro-Nitro
CN Deponit
CN Diafusor
CN Discotrine
CN Epinitril
CN Gilucor
CN Gilucor nitro
CN Glonoin
CN Glycerin trinitrate

CN Glycerol nitric acid triester
CN Glycerol trinitrate
CN Glyceryl nitrate
CN Glyceryl trinitrate
CN GTN
CN Klavikordal
CN Lenitral
CN Lentonitrina
CN Millisrol
CN Minitran
CN Minitran (nitroglycerin)
CN Myoglycerin
CN NG
CN Niglin
CN Niglycon
CN Niong
CN Nitora
CN Nitrin
CN Nitrine
CN Nitrine-TDC
CN Nitro Mack
CN Nitro-Bid
CN Nitro-Dur
CN Nitro-Gesani
CN Nitro-lent
CN Nitro-PRN
CN Nitro-Span
CN Nitrocardin
CN Nitroderm
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
FS 3D CONCORD
DR 8013-23-8, 9010-02-0, 105469-31-6, 80066-48-4, 100292-13-5
MF C3 H5 N3 O9
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L28 ANSWER 1 OF 10 USPATFULL
ACCESSION NUMBER: 2003:146305 USPATFULL
TITLE: 97 human secreted proteins
INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES
Florence, Kimberly A., Rockville, MD, UNITED STATES
Ni, Jian, Germantown, MD, UNITED STATES
Rosen, Craig A., Laytonsville, MD, UNITED STATES
Carter, Kenneth C., North Potomac, MD, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Olsen, Henrik S., Gaithersburg, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Brewer, Laurie A., St. Paul, MN, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
LaFleur, David W., Washington, DC, UNITED STATES
Endress, Gregory A., Florence, MA, UNITED STATES
Ebner, Reinhard, Gaithersburg, MD, UNITED STATES
Birse, Charles E., North Potomac, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003100051	A1	20030529
APPLICATION INFO.:	US 2001-948783	A1	20010910 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-892877, filed on 28 Jun 2001, PENDING Continuation of Ser. No. US 1999-437658, filed on 10 Nov 1999, ABANDONED Continuation-in-part of Ser. No. WO 1999-US9847, filed on 6 May 1999, UNKNOWN

PRIORITY INFORMATION:	NUMBER	DATE
	US 2000-231846P	20000911 (60)
	US 1998-85093P	19980512 (60)
	US 1998-85094P	19980512 (60)
	US 1998-85105P	19980512 (60)
	US 1998-85180P	19980512 (60)
	US 1998-85927P	19980518 (60)
	US 1998-85906P	19980518 (60)
	US 1998-85920P	19980518 (60)
	US 1998-85924P	19980518 (60)
	US 1998-85922P	19980518 (60)
	US 1998-85923P	19980518 (60)
	US 1998-85921P	19980518 (60)
	US 1998-85925P	19980518 (60)
	US 1998-85928P	19980518 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 32767
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
SUMM . . . indicates it plays a role in normal neural function. Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. The tissue distribution in T-cells indicates that polynucleotides and polypeptides corresponding to this gene. . .
SUMM . . . indicates it plays a role in normal neural function. Potentially, this gene product is involved in synapse formation,

neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival.

SUMM . . . breast cancer and uterine cancer. Expression of this gene in brain also indicates that it may play a role in **neurological function**, and that its absence may lead to disorders such as Alzheimer's and/or Parkinson's disease. Expression of this gene product at. . .

SUMM . . . involved in neuronal survival; synapse formation; conductance; neural differentiation, etc. Such involvement may impact many processes, such as learning and **cognition**. Additionally, the amygdala processes sensory information and relays this to other areas of the brain including the endocrine and autonomic. . .

SUMM . . . indicates it plays a role in normal neural function. Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. In addition, the gene or gene product may also play a role in the. . .

SUMM . . . involved in neuronal survival, synapse formation, conductance, neural differentiation, etc. Such involvement may impact many processes, such as learning and **cognition**. It may also be useful in the treatment of such neurodegenerative disorders as schizophrenia, ALS, or Alzheimer's. Furthermore, the protein. . .

SUMM . . . indicates it plays a role in normal neural function. Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. In addition, the gene or gene product may also play a role in the. . .

SUMM . . . involved in neuronal survival; synapse formation; conductance; neural differentiation, etc. Such involvement may impact many processes, such as learning and **cognition**. Polynucleotides and polypeptides corresponding to this gene may also be useful in the treatment of such neurodegenerative disorders as schizophrenia;. . .

SUMM . . . role in normal neural function. Potentially, polynucleotides and polypeptides corresponding to this gene are involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

SUMM . . . in normal neural function. Potentially, polynucleotides and polypeptides corresponding to this gene would be involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. The tissue distribution in B-cells and macrophage indicates that polynucleotides and polypeptides corresponding to. . .

SUMM . . . role in normal neural function. Potentially, polynucleotides and polypeptides corresponding to this gene are involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

SUMM . . . role in normal neural function. Potentially, polynucleotides and polypeptides corresponding to this gene are involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

SUMM . . . a role in normal neural function. Potentially, polynucleotides and polypeptides of the invention are involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. In addition, the gene or gene product may also play a role in the. . .

SUMM . . . role in normal neural function. Potentially, polynucleotides and polypeptides corresponding to this gene are involved in synapse formation, neurotransmission, learning, **cognition**,

homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

SUMM . . . role in normal neural function. Potentially, polynucleotides and polypeptides corresponding to this gene are involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Polynucleotides and polypeptides of the invention would be useful as reagents for differential identification. . .

SUMM . . . indicates it plays a role in normal neural function. Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. The tissue distribution in testes, kidney, and other tissues associates with the endocrine system. . .

SUMM . . . a role in normal neural function. Potentially, polynucleotides and polypeptides of the invention are involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Moreover, the expression within fetal tissue and other cellular sources marked by proliferating cells. . .

SUMM . . . a role in normal neural function. Potentially, polynucleotides and polypeptides of the invention are involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. The tissue distribution in bone marrow and other immune tissues indicates that polynucleotides and. . .

SUMM . . . involved in neuronal survival; synapse formation; conductance; neural differentiation, etc. Such involvement may impact many processes, such as learning and **cognition**. Alternatively, the tissue distribution in endometrial tumor tissue indicates that polynucleotides and polypeptides of the invention would be useful for. . .

SUMM . . . which are useful for treating or preventing a nervous system disorder may be selected by testing for biological activity in **promoting** the survival or differentiation of neurons. For example, and not by way of limitation, compositions of the invention which elicit. . . time of neurons in culture; (2) increased sprouting of neurons in culture or in vivo; (3) increased production of a **neuron**-associated molecule in culture or in vivo, e.g., choline acetyltransferase or acetylcholinesterase with respect to motor neurons; or (4) decreased symptoms of **neuron** dysfunction in vivo. Such effects may be measured by any method known in the art. In preferred, non-limiting embodiments, increased. . . in Pestronk et al. (Exp. Neurol. 70:65-82 (1980)) or Brown et al. (Ann. Rev. Neurosci. 4:17-42 (1981)); increased production of **neuron**-associated molecules may be measured by bioassay, enzymatic assay, antibody binding, Northern blot assay, etc., using techniques known in the art and depending on the molecule to be measured; and motor **neuron** dysfunction may be measured by assessing the physical manifestation of motor **neuron** disorder, e.g., weakness, motor **neuron** conduction velocity, or functional disability.

SUMM . . . for pain, reproductive capabilities (preferably by Activin or Inhibin-like activity), hormonal or endocrine levels, appetite, libido, memory, stress, or other **cognitive** qualities.

DETD . . . mg/L of Stearic Acid; 2.20 mg/L of Tween 80; 4551 mg/L of D-Glucose; 130.85 mg/ml of L-Alanine; 147.50 mg/ml of **L-Arginine**-HCL; 7.50 mg/ml of L-Asparagine-H.sub.2O; 6.65 mg/ml of L-Aspartic Acid; 29.56 mg/ml of L-Cystine-2HCL-H.sub.2O; 31.29 mg/ml of L-Cystine-2HCL; 7.35 mg/ml of. . .

DETD . . . describing the biological effects of FGF-2 (basic FGF) on cortical or hippocampal neurons in vitro have demonstrated increases in both **neuron** survival and neurite outgrowth (Walicke et al., "Fibroblast growth factor **promotes** survival of dissociated hippocampal neurons and enhances neurite extension." Proc. Natl. Acad. Sci. USA 83:3012-3016. (1986), assay herein incorporated by. . .

DETD . . . of the electrode 2 mm under the surface of the solution, before addition of the different conditions. S-nitroso acetyl penicillamin (**SNAP**) is used as a positive control. The amount of released NO is expressed as picomoles per 1.times.10.sup.6 endothelial cells. All. . .

L28 ANSWER 2 OF 10 USPATFULL

ACCESSION NUMBER: 2003:113076 USPATFULL
TITLE: 97 human secreted proteins
INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES
Florence, Kimberly, Rockville, MD, UNITED STATES
Ni, Jian, Rockville, MD, UNITED STATES
Rosen, Craig A., Laytonsville, MD, UNITED STATES
Carter, Kenneth C., North Potomac, MD, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Olsen, Henrik, Gaithersburg, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Young, Paul, Gaithersburg, MD, UNITED STATES
Wei, Ying-Fei, Berkeley, CA, UNITED STATES
Brewer, Laurie A., St. Paul, MN, UNITED STATES
Soppet, Daniel R., Centreville, CA, UNITED STATES
LaFleur, David W., Washington, DC, UNITED STATES
Endress, Gregory A., Potomac, MD, UNITED STATES
Ebner, Reinhard, Gaithersburg, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003077809	A1	20030424
APPLICATION INFO.:	US 2001-892877	A1	20010628 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-437658, filed on 10 Nov 1999, ABANDONED Continuation-in-part of Ser. No. WO 1999-US9847, filed on 6 May 1999, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-85093P	19980512 (60)
	US 1998-85094P	19980512 (60)
	US 1998-85105P	19980512 (60)
	US 1998-85180P	19980512 (60)
	US 1998-85927P	19980518 (60)
	US 1998-85906P	19980518 (60)
	US 1998-85920P	19980518 (60)
	US 1998-85924P	19980518 (60)
	US 1998-85922P	19980518 (60)
	US 1998-85923P	19980518 (60)
	US 1998-85921P	19980518 (60)
	US 1998-85925P	19980518 (60)
	US 1998-85928P	19980518 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
LINE COUNT: 25009
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM [0138] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. The tissue distribution in T-cells indicates polynucleotides and polypeptides corresponding to this gene are. . .

SUMM . . . breast cancer and uterine cancer. Expression of this gene in brain also indicates that it may play a role in **neurological function**, and that its absence may lead to disorders such as

Alzheimer's & Parkinson's Disease. Expression of this gene product at. . .

SUMM . . . involved in neuronal survival; synapse formation; conductance; neural differentiation, etc. Such involvement may impact many processes, such as learning and **cognition**.

SUMM [0297] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. In addition, the gene or gene product may also play a role in the. . .

SUMM . . . involved in neuronal survival, synapse formation, conductance, neural differentiation, etc. Such involvement may impact many processes, such as learning and **cognition**. It may also be useful in the treatment of such neurodegenerative disorders as schizophrenia, ALS, or Alzheimer's. Furthermore, the protein. . .

SUMM [0392] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. In addition, the gene or gene product may also play a role in the. . .

SUMM [0404] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

SUMM . . . involved in neuronal survival; synapse formation; conductance; neural differentiation, etc. Such involvement may impact many processes, such as learning and **cognition**. It may also be useful in the treatment of such neurodegenerative disorders as schizophrenia; ALS; or Alzheimer's. Furthermore, the protein. . .

SUMM [0420] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

SUMM [0504] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. The tissue distribution in B-cells and macrophage indicates polynucleotides and polypeptides corresponding to this. . .

SUMM [0573] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

SUMM [0628] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

SUMM [0646] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. In addition, the gene or gene product may also play a role in the. . .

SUMM [0672] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

SUMM [0713] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival.

SUMM [0799] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. The tissue distribution in testes, kidney, and other tissues associates with the endocrine system. . .

SUMM [0816] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Moreover, the expression within fetal tissue and other cellular sources marked by proliferating cells. . .

SUMM [0826] Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. The tissue distribution in bone marrow and other immune tissues indicates polynucleotides and polypeptides. . .

SUMM . . . involved in neuronal survival; synapse formation; conductance; neural differentiation, etc. Such involvement may impact many processes, such as learning and **cognition**.

SUMM . . . which are useful for treating or preventing a nervous system disorder may be selected by testing for biological activity in **promoting** the survival or differentiation of neurons. For example, and not by way of limitation, compositions of the invention which elicit. . . time of neurons in culture; (2) increased sprouting of neurons in culture or in vivo; (3) increased production of a **neuron**-associated molecule in culture or in vivo, e.g., choline acetyltransferase or acetylcholinesterase with respect to motor neurons; or (4) decreased symptoms of **neuron** dysfunction in vivo. Such effects may be measured by any method known in the art. In preferred, non-limiting embodiments, increased. . . in Pestronk et al. (Exp. Neurol. 70:65-82 (1980)) or Brown et al. (Ann. Rev. Neurosci. 4:17-42 (1981)); increased production of **neuron**-associated molecules may be measured by bioassay, enzymatic assay, antibody binding, Northern blot assay, etc., using techniques known in the art and depending on the molecule to be measured; and motor **neuron** dysfunction may be measured by assessing the physical manifestation of motor **neuron** disorder, e.g., weakness, motor **neuron** conduction velocity, or functional disability.

SUMM . . . for pain, reproductive capabilities (preferably by Activin or Inhibin-like activity), hormonal or endocrine levels, appetite, libido, memory, stress, or other **cognitive** qualities.

DETD . . . mg/L of Stearic Acid; 2.20 mg/L of Tween 80; 4551 mg/L of D-Glucose; 130.85 mg/ml of L-Alanine; 147.50 mg/ml of **L-Arginine**-HCL; 7.50 mg/ml of L-Asparagine-H.sub.2O; 6.65 mg/ml of L-Aspartic Acid; 29.56 mg/ml of L-Cystine-2HCL-H.sub.2O; 31.29 mg/ml of L-Cystine-2HCL; 7.35 mg/ml of. . .

DETD . . . describing the biological effects of FGF-2 (basic FGF) on cortical or hippocampal neurons in vitro have demonstrated increases in both **neuron** survival and neurite outgrowth (Walicke et al., "Fibroblast growth factor **promotes** survival of dissociated hippocampal neurons and enhances neurite extension." Proc. Natl. Acad. Sci. USA 83:3012-3016. (1986), assay herein incorporated by. . .

DETD . . . of the electrode 2 mm under the surface of the solution, before addition of the different conditions. S-nitroso acetyl penicillamin (**SNAP**) is used as a positive control. The amount of released NO is expressed as picomoles per 1.times.10.sup.6 endothelial cells. All. . .

L28 ANSWER 3 OF 10 USPATFULL

ACCESSION NUMBER: 2003:57524 USPATFULL

TITLE: Secreted protein HT5GJ57

INVENTOR(S): Ruben, Steven M., Olney, MD, UNITED STATES
Komatsoulis, George, Silver Spring, MD, UNITED STATES
Duan, Roxanne D., Bethesda, MD, UNITED STATES
Rosen, Craig A., Laytonsville, MD, UNITED STATES
Moore, Paul A., Germantown, MD, UNITED STATES
Shi, Yanggu, Gaithersburg, MD, UNITED STATES
LaFleur, David W., Washington, DC, UNITED STATES
Ebner, Reinhard, Gaithersburg, MD, UNITED STATES
Olsen, Henrik S., Gaithersburg, MD, UNITED STATES
Brewer, Laurie A., St. Paul, MN, UNITED STATES
Florence, Kimberly A., Rockville, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Mucenski, Michael, Cincinnati, OH, UNITED STATES
Endress, Gregory A., Florence, MA, UNITED STATES

	Soppet, Daniel R., Centreville, VA, UNITED STATES
PATENT ASSIGNEE(S):	Human Genome Sciences, Inc., Rockville, MD, UNITED STATES, 20850 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003040088	A1	20030227
APPLICATION INFO.:	US 2001-984271	A1	20011029 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 2000-482273, filed on 13 Jan 2000, PENDING Continuation-in-part of Ser. No. WO 1999-US15849, filed on 14 Jul 1999, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-92921P	19980715 (60)
	US 1998-92922P	19980715 (60)
	US 1998-92956P	19980715 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 46
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 24720
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . indicates it plays a role in normal neural function. Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

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SUMM . . . Moreover, expression of this gene product in other regions of the brain indicates that it may be involved in normal **neurological function**, and may be useful in the treatment of a variety of neurological disorders. Representative uses are described in the "Biological. . .

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DETD . . . for pain, reproductive capabilities (preferably by Activin or Inhibin-like activity), hormonal or endocrine levels, appetite, libido, memory, stress, or other **cognitive** qualities.

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DETD . . . of the electrode 2 mm under the surface of the solution, before addition of the different conditions. S-nitroso acetyl penicillamin (**SNAP**) is used as a positive control. The amount of released NO is expressed as picomoles per 1.times.10.sup.6 endothelial cells. All. . .

L28 ANSWER 4 OF 10 USPATFULL

ACCESSION NUMBER:	2003:23660 USPATFULL
TITLE:	Secreted protein HT5GJ57
INVENTOR(S):	Ruben, Steven M., Olney, MD, UNITED STATES Komatsoulis, George, Silver Spring, MD, UNITED STATES Duan, Roxanne D., Bethesda, MD, UNITED STATES Rosen, Craig A., Laytonsville, MD, UNITED STATES Moore, Paul A., Germantown, MD, UNITED STATES Shi, Yanggu, Gaithersburg, MD, UNITED STATES LaFleur, David W., Washington, DC, UNITED STATES Ebner, Reinhard, Gaithersburg, MD, UNITED STATES Olsen, Henrik, Gaithersburg, MD, UNITED STATES Brewer, Laurie A., St. Paul, MN, UNITED STATES Florence, Kimberly A., Rockville, MD, UNITED STATES Young, Paul, Gaithersburg, MD, UNITED STATES Mucenski, Michael, Cincinnati, OH, UNITED STATES Endress, Gregory A., Florence, MA, UNITED STATES Soppet, Daniel R., Centreville, VA, UNITED STATES
PATENT ASSIGNEE(S):	Human Genome Sciences, Inc., Rockville, MD (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003017500	A1	20030123
APPLICATION INFO.:	US 2001-984276	A1	20011029 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 2000-482273, filed on 13 Jan 2000, PENDING Continuation-in-part of Ser. No. WO 1999-US15849, filed on 14 Jul 1999, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-92921P	19980715 (60)
	US 1998-92922P	19980715 (60)
	US 1998-92956P	19980715 (60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS:	74
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	3 Drawing Page(s)
LINE COUNT:	25053

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . indicates it plays a role in normal neural function. Potentially, this gene product is involved in synapse formation, neurotransmission, learning, **cognition**, homeostasis, or neuronal differentiation or survival. Furthermore, the protein may also be used to determine biological activity, to raise antibodies,. . .

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L28 ANSWER 5 OF 10 USPATFULL

ACCESSION NUMBER: 2003:74478 USPATFULL

TITLE: Secreted protein HT5GJ57

INVENTOR(S): Ruben, Steven M., Olney, MD, United States
Komatsoulis, George, Silver Spring, MD, United States
Duan, Roxanne D., Bethesda, MD, United States
Rosen, Craig A., Laytonsville, MD, United States
Moore, Paul A., Germantown, MD, United States
Shi, Yanggu, Gaithersburg, MD, United States
LaFleur, David W., Washington, DC, United States
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Brewer, Laurie A., St. Paul, MN, United States
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Young, Paul, Gaithersburg, MD, United States
Mucenski, Michael, Cincinnati, OH, United States
Endress, Gregory A., Potomac, MD, United States
Soppet, Daniel R., Centreville, VA, United States

PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6534631	B1	20030318
APPLICATION INFO.:	US 2000-482273		20000113 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 1999-US15849, filed on 14 Jul 1999

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-92956P	19980715 (60)
	US 1998-92922P	19980715 (60)
	US 1998-92921P	19980715 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Borin, Michael
ASSISTANT EXAMINER: Zhou, Shubo (Joe)
LEGAL REPRESENTATIVE: Human Genome Sciences, Inc.
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 23784
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L28 ANSWER 6 OF 10 IFIPAT COPYRIGHT 2003 IFI DUPLICATE 1

AN 10211466 IFIPAT;IFIUDB;IFICDB

TITLE: NITRIC OXIDE DONORS FOR INDUCING **NEUROGENESIS**

INVENTOR(S): Chopp; Michael, Southfield, MI, US
Zhang; Rui Lan, Troy, MI, US

PATENT ASSIGNEE(S): Unassigned

AGENT: KOHN & ASSOCIATES, Suite 410, 30500 Northwestern Highway, Farmington Hills, MI, 48334, US

	NUMBER	PK	DATE
PATENT INFORMATION:	US 2002155173	A1	20021024

APPLICATION INFORMATION: US 2002-75715 20020213

	APPLN. NUMBER	DATE	GRANTED PATENT NO. OR STATUS
CONTINUATION-IN-PART OF:	US 2002-18201	20020402	PENDING
Section 371 PCT Filing OF:	WO 1900-US16353	20000614	UNKNOWN

	NUMBER	DATE	
PRIORITY APPLN. INFO.:	US 1999-138971P	19990614	(Provisional)
FAMILY INFORMATION:	US 2002155173	20021024	

DOCUMENT TYPE: Utility
Patent Application - First Publication
FILE SEGMENT: CHEMICAL
APPLICATION
NUMBER OF CLAIMS: 8 25 Figure(s).
DESCRIPTION OF FIGURES:
FIG. 1 is a photograph showing the BrdU-positive nuclei in the selected areas;
FIGS. 2A and 2B are graphs showing the amount of BrdU-positive cells in the subventricular zone (SVZ);
FIG. 3 is a graph showing the amount of BrdU-positive cells in the dentate gyrus;
FIGS. 4A and 4B are graphs showing the percent of distribution of BrdU cells in the dentate gyrus;
FIG. 5 is a photograph showing the size of BrdU immunoreactive cells in relation to granule cells in granule layers;
FIGS. 6A and 6B are graphs showing the amount of BrdU-positive cells in the SVZ;
FIGS. 7A and 7B are graphs showing the amount of BrdU-positive cells in the olfactory bulb (OB);
FIGS. 8A and 8B are graphs showing the amount of BrdU-positive cells in the dentate gyrus;
FIG. 9 is a graph showing a lesion volume study;
FIG. 10 is a graph showing in Time versus MCAo, the results of an adhesive removal test;
FIG. 11 is a graph showing the results of a Rotarod test;
FIG. 12 is a graph showing the result of the NSS test;
FIG. 13 is a graph showing the percent weight;
FIG. 14 is a graph showing the results of a Rotarod test;
FIG. 15 is a graph showing further results of a Rotarod test
FIG. 16 is a graph showing the results of the footfault test;
FIG. 17 is a graph showing the results of further adhesive removal tests;
FIGS. 18A and 18B are bar graphs showing cell proliferation in Dentate Gyrus (FIG. 18A) and SVZ (FIG. 18B) in ischemic mice treated with saline and varying doses of sildenafil;
FIGS. 19A-F are photographs and graphs showing TuJ1 immunoreactive cells in the SVZ (FIGS. 19A-C) and dentate gyrus (FIGS. 19D-F) 28 days after ischemia;
FIGS. 20A and 20B are line graphs showing the effects of sildenafil treatment on the foot fault test;
FIGS. 21A and 21B are line graphs showing the effects of sildenafil treatment on the adhesive removal test;
FIGS. 22A and 22B are line graphs showing the effects of sildenafil treatment on animal body weight loss;
FIGS. 23A-C are line graphs showing the effects of sildenafil treatment on the foot fault test (FIG. 23A), adhesive removal test (FIG. 23B), and body weight loss (FIG. 23C) when treatment was initiated 24 hours after ischemia;
FIGS. 24A and 24B are bar graphs showing levels of cGMP in the cerebellum (FIG. 24A) and cortex (FIG. 24B) after treatment with sildeafil in non ischemic rats; and
FIGS. 25A and 25B are photographs showing RT-PCR of PDE5A1 (FIG. 25A) and PDE5A2 (FIG. 25B) mRNA in the cortex of non ischemic rats and the ipsilateral cortex of rats 2 hours to 7 days after ischemia.
TI NITRIC OXIDE DONORS FOR INDUCING **NEUROGENESIS**

AB There is provided a method of promoting **neurogenesis** by administering a therapeutic amount of a nitric oxide donor compound to a patient in need of **neurogenesis** promotion. Also provided is a compound for providing **neurogenesis** having an effective amount of a nitric oxide donor sufficient to promote **neurogenesis**. A nitric oxide compound for promoting **neurogenesis** is also provided. Further, a method of augmenting the production of brain cells and facilitating cellular structural and receptor changes. . . compound to a site in need of augmentation is provided. There is provided a method of increasing both neurological and **cognitive** function by administering an effective amount of a nitric oxide donor compound to a patient.

ECLM D R A W I N G

1. A method of promoting **neurogenesis** comprising the step of: administering a therapeutic amount of a nitric oxide donor compound to a patient in need of **neurogenesis** promotion.

ACLM 2. A compound for promoting **neurogenesis** comprising an effective amount of a nitric oxide donor sufficient to promote **neurogenesis**.

3. A **neurogenesis** promoter comprising a nitric oxide donor in a pharmaceutically acceptable carrier.

4. The **neurogenesis** promoter according to claim 3, wherein said nitric oxide donor augments nitric oxide in a tissue.

5. The **neurogenesis** promoter according to claim 4, wherein said nitric oxide donor is selected from the group consisting essentially of **phosphodiesterase inhibitors**, **L-arginine**, sildenafil, and LIPITOR.

7. A method of increasing **neurological function** by administering an effective amount of a nitric oxide donor to a patient.

8. A method of increasing **cognitive** and **neurological function** by administering an effective amount of a nitric oxide donor compound to a patient.

L28 ANSWER 7 OF 10 USPATFULL

ACCESSION NUMBER:	2002:300807 USPATFULL		
TITLE:	Methods for treating disorders of neuronal deficiency with bone marrow-derived cells		
INVENTOR(S):	Brazelton, Timothy R., Cupertino, CA, UNITED STATES Blau, Helen M., Menlo Park, CA, UNITED STATES		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002168350	A1	20021114
APPLICATION INFO.:	US 2001-993045	A1	20011113 (9)
	NUMBER		DATE
PRIORITY INFORMATION:	US 2000-247128P		20001110 (60)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO, CA, 94304-1018		
NUMBER OF CLAIMS:	34		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1696		

SUMM [0041] The term "epilepsy" refers to those neuronal deficiencies characterized by chronic, recurrent paroxysmal changes in **neurological function**. Each episode is referred to as a "seizure", and may present with motor, sensory, autonomic, or psychic symptoms. Seizures with. . .

SUMM . . . disorders (DSM-IV 292, 292.11, 292.12, 292.81-.84, 292.89, 292.9), psychiatric disorders secondary to a medical condition (DSM-IV 293.83, 293.89, 293.9, 294), **cognitive** disorders (DSM-IV

294.9), depressive disorders (DSM-IV 296.3, 296.31-.35, 311), bipolar disorders (DSM-IV 296.4, 296.41-.46, 296.5, 296.51-.56, 296.6, 296.61-.66, 296.7, 296.8,. . . stress disorder (DSM-IV 309.81), mental retardation, (DSM-IV 317, 318, 318.1, 318.2, 319), neuroleptic-induced Parkinsonism (DMS-IV 332.1), narcolepsy (DSM-IV 347), age-related **cognitive** decline (DSM-WV 780.9), borderline intellectual functioning (DSM-IV V62.89). The term "psychiatric disorders other than schizophrenia", as used herein, specifically excludes. . .

SUMM . . . desirable in the disorder to be treated is introduced into the bone marrow-derived cells. The construct may employ a ubiquitous **promoter** (beta-actin, for example), but **neuron** -specific **promoters**, such as the **promoters** for NeuN (neuronal nuclei), Calmodulin-dependent Protein Kinase II (CaMKII), Calmodulin-dependent Protein Kinase IV (CaMKIV), any of the neurofilaments (including the. . . kD, 145 kD, 70 kD, and 65 kD forms), class III beta-tubulin calbindin D-28k, microtubule associated protein 2, synaptic protein **SNAP**-25, synaptophysin, NMDA receptor, **neuron** specific enolase, tyrosine hydroxylase, neural nestin, synapsin-1, tau, Hu, doublecortin, and the like, are preferred. For example, when the bone. . .

DETD . . . 20% sucrose in phosphate buffer overnight at 4.degree. C. The brains were embedded in TISSUE-TEK.RTM. O.C.T. compound (Sakura Finetek) and **snap** frozen. 20-40 .mu.m coronal cryosections were taken from the olfactory bulb (Bregma -4.1 to -3.6).

L28 ANSWER 8 OF 10 USPATFULL

ACCESSION NUMBER:	2002:221781 USPATFULL		
TITLE:	Methods and compositions for producing a neurosalutary effect in a subject		
INVENTOR(S):	Benowitz, Larry I., Newton Square, MA, UNITED STATES		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002119923	A1	20020829
APPLICATION INFO.:	US 2001-872347	A1	20010601 (9)
	NUMBER		DATE
PRIORITY INFORMATION:	US 2000-208778P		20000601 (60)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	LAHIVE & COCKFIELD, 28 STATE STREET, BOSTON, MA, 02109		
NUMBER OF CLAIMS:	46		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1372		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

SUMM . . . effect in a subject with a neurological condition; such effects include promoting neuronal survival, axonal outgrowth, neuronal regeneration or normalized **neurological function** in a subject.

SUMM . . . peptide; calcium ionophores; membrane depolarization; macrophage-derived factors that stimulate cAMP; agents that stimulate macrophage activation such as zymosan or IFN-.gamma.; **phosphodiesterase inhibitors** such as pentoxifylline and theophylline; specific phosphodiesterase IV (PDE IV) inhibitors; and beta 2-adrenoreceptor agonists such as salbutamol. The term. . .

SUMM . . . or to the brain, cranial nerves, traumatic brain injury, stroke, cerebral aneurism, and spinal cord injury. Other neurological disorders include **cognitive** and neurodegenerative disorders such as Alzheimer's disease, dementias related to Alzheimer's disease (such as Pick's disease), Parkinson's and other Lewy. . .

SUMM . . . with an axogenic factor and/or a cAMP modulator) to produce a neurosalutary effect in a subject include standard tests of

neurological function in human subjects or in animal models of spinal injury (such as standard reflex testing, urologic tests, urodynamic testing, tests. . .

DETD . . . the retina was in question were excluded from the study. For intraocular injections, the globe was retracted with a mosquito **snap** to expose its posterior aspect. In some cases, injections were made through the sclera and retina with a 30G needle. . .

DETD . . . (1993) Glia, 7:102-110; Kreutzberg (1996) Trends Neurosci. 19:312-318). In the rat striatum, puncture wounds stimulate microglia that express BDNF and **promote** the infiltration of macrophages that express GDNF; these two growth factors are likely to contribute to the survival and outgrowth. . . (1999) Neuroreport 10:419-422), and CNTF can stimulate RGC survival (Mey and Thanos (1993) Brain Res. 602:304-317; Meyer-Franke et al. (1995) **Neuron** 15:805-819) and axon regeneration (Jo et al. (1999) Neuroscience 89:579-591; Cui et al. (1999) Invest. Ophthalmol. Vis. Sci. 40:760-766). However,. . .

CLM What is claimed is:

. . . cAMP modulator is non-hydrolyzable cAMP analogues, adenylate cyclase activators, macrophage-derived factors that stimulate cAMP, macrophage activators, calcium ionophores, membrane depolarization, **phosphodiesterase inhibitors**, specific phosphodiesterase IV inhibitors, beta2-adrenoreceptor inhibitors or vasoactive intestinal peptide.

L28 ANSWER 9 OF 10 USPATFULL

ACCESSION NUMBER: 2002:191539 USPATFULL

TITLE: Full-length human cDNAs encoding potentially secreted proteins

INVENTOR(S): Milne Edwards, Jean-Baptiste Dumas, Paris, FRANCE
Bougueleret, Lydie, Petit Lancy, SWITZERLAND
Jobert, Severin, Paris, FRANCE

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002102604	A1	20020801	
APPLICATION INFO.:	US 2000-731872	A1	20001207	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-169629P	19991208 (60)
	US 2000-187470P	20000306 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: John Lucas, Ph.D., J.D., Genset Corporation, 10665 Srrento Valley Road, San Diego, CA, 92121-1609
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Page(s)
LINE COUNT: 28061
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DETD [0670] The helix-loop-helix (HLH) family of transcriptional regulators is involved in the control of different cellular differentiation phenomenon such as **neurogenesis**, haematopoiesis, myogenesis and angiogenesis. The HLH proteins are found in all eukaryotic organisms ranging from yeast saccharomyces cerevisiae to human. . .

DETD . . . injury, neuro-degenerative disorders (acute and chronic), Huntington's disease, Parkinson's disease, migraine, depression, peripheral neuropathy, pain, cerebral amyloid angiopathy, nootropic or **cognition** enhancement, amyotrophic lateral sclerosis, ocular angiogenesis, macular degeneration, abnormal wound healing, bums, diabetes, scleritis, AIDS, sepsis, septic shock.

DETD . . . in humans. These WD-40 proteins turn off a wide variety of genes, including those involved in segmentation, sex determination, and

neurogenesis (controlled by Groucho) and those involved in photomorphogenesis (controlled by COP1). All of these WD40 containing proteins have been proposed. . .

DETD . . . vesicle exocytosis, the vesicular protein synaptobrevin (also called Vesicle-Associated Membrane Protein; VAMP) is the v-SNARE, and the plasma membrane-associated protein **SNAP**-25 (Synaptosomal-Associated Protein of 25 kDa) and syntaxin 1 function as t-SNARE. Formation of the SNARE complex (or core complex) is followed by recruitment of the cytosolic proteins alpha, beta and gamma **SNAP** (Soluble N-ethylmaleimide-sensitive Attachment Protein) and NSF (N-ethylmaleimide-Sensitive Factor), which are required for membrane fusion. Proteins from two gene families have. . .

DETD . . . interact with syntaxin isoforms 1a, 2 and 3. However, Munc-18 has not been found to be part of the 20S SNARE/**SNAP**/NSF protein complex. In vitro, the binding of Munc-18 to syntaxin inhibits the interaction of syntaxin with VAMP and **SNAP**-25 as well as **SNAP**-23 (a homologue of **SNAP**-25) and thereby negatively regulates the formation of the synaptic SNARE fusion complex. In agreement with a negative regulatory role of. . .

DETD . . . the vesicular protein synaptobrevin and synaptogyrin (also called Vesicle-Associated Membrane Protein; VAMP) are the v-SNARE, and the plasma membrane-associated protein **SNAP**-25 (Synaptosomal-Associated Protein of 25 kDa) and syntaxin 1 function as t-SNARE. Formation of the SNARE complex (or core complex) is followed by recruitment of the cytosolic proteins alpha, beta and gamma **SNAP** (Soluble N-ethylmaleimide-sensitive Attachment Protein) and NSF (N-ethylmaleimide-Sensitive Factor), which are required for membrane fusion. In transfected PC12 cells, synaptogyrin 1. . .

DETD . . . disorder or condition associated with abnormal neurotransmitter release, such as depression, which is associated with decreased serotonin secretion, or any **neurological function**, e.g. memory, which could be enhanced or otherwise modulated by altering the quantity, frequency, or any other property of neurotransmitter. .

DETD . . . involved in neuronal survival, synapse formation, conductance, neural differentiation, etc. Such involvment may impact many processes, such as learing and **cognition**. Alternatively, the tissue distribution in endometiral tumor tissue, germ cell tumors and skin melanomas indicates that the translation product of. . .

DETD . . . protein, carbohydrate, vitamins, minerals, cofactors or other nutritional factors or component(s); effecting behavioral characteristics, including, without limitation, appetite, libido, stress, **cognition** (including **cognitive** disorders), depression (including depressive disorders) and violent behaviors; providing analgesic effects or other pain reducing effects; promoting differentiation and growth. . .

L28 ANSWER 10 OF 10 USPATFULL

ACCESSION NUMBER:	2000:137814 USPATFULL
TITLE:	Allelic polygene diagnosis of reward deficiency syndrome and treatment
INVENTOR(S):	Blum, Kenneth, San Antonio, TX, United States
PATENT ASSIGNEE(S):	City of Hope National Medical Center, Duarte, CA, United States (U.S. corporation) The University of Texas System AMD Board of Regents, Austin, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6132724		20001017	
APPLICATION INFO.:	US 1998-69886		19980429	(9)
DOCUMENT TYPE:	Utility			
FILE SEGMENT:	Granted			
PRIMARY EXAMINER:	Witz, Jean C.			

LEGAL REPRESENTATIVE: Hodgins, Daniel S.
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT: 20845

SUMM . . . the etiology of attention-deficit hyperactivity disorder. A significant increase in plasma noradreneline (NA) in ADHD children with reading and other **cognitive** disabilities compared to ADHD children without **cognitive** disabilities has been demonstrated (Halperin et al., YEAR). They proposed that the ADHD+**cognitive** disabilities was associated with NA dysregulation affecting the parietal/temporal lobe attention centers. Since these brain areas are in proximity to auditory and linguistic processing regions, this could account for the comorbid **cognitive** disabilities. From a clinical perspective, the significant improvement in symptoms that often occurs following treatment with clonidine (Hunt et al.,. . .

SUMM . . . assessed by the WRAT-R (Wide-Range Achievement Test-Revised). This distinction was consistent with prior studies of others suggesting that ADHD with **cognitive** disabilities was a distinct subtype of ADHD (August and Garfinkel, 1989; McGee et al., 1989; Pennington et al., 1993). It. . .

SUMM It has been proposed that ADHD+**cognitive** disorders was due to a dysregulation of NA metabolism of the LC involving adrenergic .alpha.2 receptors, and primarily affected the. . . YEAR) Since these brain areas are in proximity to auditory and linguistic processing regions, this could account for the comorbid **cognitive** disabilities. It would be a mistake to assume that these are pure forms since ADHD is a polygenic disorder (Comings. . . types. Studies in primates show that NA and defects in adrenergic .alpha.2 receptors also play a role in prefrontal lobe **cognitive** defects (Arnsten, 1997).

SUMM . . . creating or alleviating certain psychological traits. In humans, it has been suggested that meso-prefrontal dopaminergic activity is involved in human **cognition** (Weinberger et al., 1988). In patients with Parkinson's disease and possibly in patients with schizophrenia, prefrontal activation during a **cognitive** task and with clinical signs of dopaminergic function (Weinberger et al., 1988k). Brain chemical turnover in animals have demonstrated changes. . .

SUMM . . . upper pons. Both acetylcholinergic (ACH) and dopaminergic systems (DA) have been found to be crucial for the maintenance of accurate **cognitive** performance. A series of studies, examining those aspects of **cognitive** function, revealed by the radial-arm maze, found that these two neurotransmitter systems interact in a complex fashion (Levin et al.,. . . the D.sub.2 antagonist raclopride, but not with the D.sub.1 antagonist SCH23390. The D.sub.2 receptor was indicated in nicotinic actions on **cognitive** function by the finding that the selective D.sub.2 agonist LY1771555 reverses the choice accuracy deficit caused by mecamylamine. The effectiveness of these selective DA treatments in reversing **cognitive** deficits was due to ACH under-activation (Levin et al., 1990k).

SUMM . . . suggests that serotonin may modulate cholinergic function in several regions of the mammalian brain and that these serotonergic/cholinergic interactions affect **cognition**. It is concluded that not all mnesic perturbations induced by concurrent manipulations of the serotonergic and cholinergic systems can be attributed to a serotonergic modification of the cholinergic system. The **cognitive** faculties of an organism arise from interactions among several neurotransmitters such as DA within brain structures such as, for instance,. . .

SUMM . . . of dopamine agonists on humans are still poorly understood. It has been hypothesized that bromocriptine would have an effect on **cognitive** functions associated with the prefrontal cortex via its effects on cortical dopamine receptors and on sub-cortical receptors

in areas that. . . drug, while low- capacity subjects improved. These results demonstrate an empirical link between a dopamine-mediated working memory system and higher **cognitive** function in humans. It has been shown that the DRD2 A1 allele is also associated with visual-spacial memory deficits as. . .

SUMM . . . was much more robust as one approached the six wk period of treatment. Dopamine D.sub.2 agonist bromocryptine can improve higher-level **cognitive** functions.

DETD . . . 25.000 Obesity, Focus
L-tyrosine 150.000 Gambling, Agitation, Anxiety, Nicotine, Cocaine, Obesity
Ornithine aspartate 10.000 Obesity
Kola nut (caffeine) 20.000 Obesity
L-arginine 10.000 Obesity
pyroglutamate
Camomile* 25.000 Nicotine
Taurine* 25.000 Agitation, Anxiety
Valerian* 10.000 Nicotine
Willow bark extract* 60.00 PMS symptoms

Note:. . .

DETD . . . L-tyrosine 9 to 90,000 mg
L-Glutamine 3 to 30,000 mg
L-tryptophan 5 to 5,000 mg
5-Hydroxy-tryptophan 0.5 to 500 mg
L-Arginine pyroglutamate 1 to 1000 mg
Ornithine Aspartate 1 to 1000 mg
D-leucine 16 to 5000 mg
DL-leucine 32 to 10,000. . .

DETD . . . report, known to the inventors, in humans of the effects of daily ingestion of a specific amino acid mixture on **cognitive** event-related potentials (ERPs) associated with performance. **Cognitive** ERPs were generated by two computerized visual attention tasks, the Spatial Orientation Task(SOT) and Contingent Continuous Performance Task(CCPT), in normal. . . component of the ERPs was seen after the composition for both tasks ($p<0.009$), as well as improvement with respect to **cognitive** processing speeds ($p<0.015$). The enhancement of **neurological function** observed in this study on normal controls is consistent with the facilitation of recovery of individuals with RDS (i.e. substance. . .

DETD . . . on the fact that attentional processing is governed by neurotransmitter function and certain specific neurotransmitters are responsible for normal brain **cognitive** functioning, which could be modulated by certain precursor amino acids. Understanding of electrophysiological functioning of the brain resides in the. . .

DETD One area of recent concern is the impaired **cognition** observed in children of alcoholics (as measured by P300 waves), and the poor focusing of patients diagnosed with ADD/ADHD. In. . .

DETD GABA, taken back into the presynaptic **neuron** after release and receptor interaction, is recycled as a potentially reusable transmitter. GABA is enzymatically metabolized in both the nerve. . . NAD and NADH as co-factors. The inventors' formulation for RDS takes this fact into account by adding pyridoxal-5-phosphate as a **promoter** of the oxidative-reductive pathway.

DETD . . . receptors has been reported. Certain mechanisms are accepted in neuroscience related to the differential roles of various neurotransmitters in terms **cognition**. Cholinergic mechanisms underlie the fixation of memory trace. The noradrenergic system of the brain enhances positive reinforcement. The serotonergic mechanisms. . .

DETD . . . by scopolamine significantly better than did E2020 or tacrine, indicating it may be a promising agent for clinical therapy of **cognitive** impairment in patients with Alzheimer's Disease (Cheng et al., 1996).

DETD **Cognition**, Electrophysiology and Neurotransmitter Function

DETD . . . sex, and stress may influence attentional processing. While a number of neurotransmitter pathways are ultimately involved in focusing, memory and **cognition** in general at least four major pathways are preferred in this invention to be involved: serotonergic, opioidergic, GABAergic and dopaminergic. A brief review of the literature concerning **cognition** and neurotransrnitters will favor the positive relationship between the dopaminergic system and attentional processing. This relationship fosters the concept that. . .

DETD . . . the first report of the effects of daily ingestion of a specific amino acid mixture, Kantroll , in humans on **cognitive** event-related potentials (ERPs) associated with performance. **Cognitive** ERPs were generated by responses to two computerized visual attention tasks, the Spatial Orientation Task (SOT) and Contingent Continuous Performance. . .

DETD . . . evaluate quantitative neurophysiological changes associated with the treatment with Kantroll.TM.. The electrophysiological portion focused on the P300 component of the **cognitive** event-related potential (ERP), evoked by two visual attention tasks. The advantage of this electrophysiological approach over more conventional EEG analyses. . . family of components of the ERPs, each representing a stage of information processing. However, the ERP analysis here focused on **cognitive** ERPs, specifically on the P300 component. Quantitative ERP changes have recently been shown to vary predictably over a range of. . .

DETD . . . performance correlates of chronic Kantroll administration on normal subjects, especially as indexed by changes in the P300 component of the **cognitive** ERP.

DETD . . . respective A' (a standard signal detection parameter) values. This paradigm samples the orientation to stimuli, fluidity of attention, along with **cognitive** processing speeds.

DETD The various components of the **cognitive** ERPs associated with the Contingent Continuous Performance Task (CCPT) have many similarities to those generated by other continuous performance tasks,. . .

DETD . . . cocaine abuse is altered attentional processing (Robledo et al., 1993). Moreover, human attentional processing and the P300 component of the **cognitive** ERP are often linked (e.g., Hillyard et al., 1973). At this point, then, is worthwhile to revisit the neurology of. . . it provides the context for the importance of the findings. As widely known, the P300 is one of several endogenous **cognitive** ERPs components, whose latency, morphology, and spatial distribution are highly dependent upon the psychological context in which the stimulus is. . .

DETD As the characteristics of any **cognitive** ERP are very much anchored to the eliciting behavioral paradigm, it is important to keep in mind that the performance. . . then, the P300 behaves as a modality-independent byproduct of the selective attention process--a necessary foundation to subsequent emotional, memory, and **cognitive** processing. These performance probes, then, challenge the functionality of pathways along the frontal-temporal axis. It is precisely these forebrain regions. . .

DETD . . . The status of ADD as a disorder would be more assured if there were a unique pattern of attentional or **cognitive** correlates which discriminated ADD from other disorders (McGee, et. al., 1989).

DETD Many of the behavioral and **cognitive** disorders including ADHD, CD, ODD, antisocial personality disorder, dyslexia and other teaming disorders, and autism, are three to five times. . .

DETD TABLE 79

ADHD With and Without **Cognitive** Disabilities (CD)

	ADHD without CD	ADHD with CD

Cognitive disorders
absent present
Verbal IQ normal low
Brain region involved prefrontal lobes parietal/temporal lobes
Brain nucleus involved ventral tegmental area. . .

DETD . . . or the dopamine .beta.-hydroxylase genes are associated with ADHD per se, and if there is a preferential association with the ADHD+ **cognitive** disorders subtype. The inventors utilized the MspI polymorphism in the promoter region of the ADRA2A gene (Lario et al., 1997),. . .

DETD Discussion. The identification of two subtypes of ADHD, one with and one without **cognitive** defects, that involve distinct regions of the brain, distinct neurotransmitters, and distinct sets of genes (Table 80), could have considerable. . .

DETD . . . 83, the defects in NA metabolism and variant NA genes are more likely to be involved in ADHD children with **cognitive** defects than ADHD children without **cognitive** defects.

DETD . . . the concept that NA genes are preferentially involved in ADHD+LD individuals, while dopamine genes are equally involved in ADHD whether **cognitive** defects are present or not.

DETD . . . inventors believe that the assessments for the LD score in this manner represents a robust test for the presence of **cognitive** disabilities. Ironically, the assessment of whether a child performed below average in two or more academic subjects (math, reading, writing). . . score than having been in an LD class. This indicates that actual classroom performance can provide a reliable estimate of **cognitive** abilities, and that many children who are doing poorly academically, are never placed into special classes.

DETD . . . included under the category of "depressive disorders not otherwise specified" in the DSM-IV. However, a number of factors (biological and **cognitive** studies, treatment responses) differentiate PMDD from other mood disorders (Yonkers, 1997).

DETD Arnsten, Steere, Hunt, "The contribution of a.sub.2 -noradrenergic mechanism to prefrontal cortical **cognitive** function. Potential significance for Attention-Deficit Hyperactivity Disorder," Arch. Gen. Psychiatry, 53:448-455, 1996.

DETD August and Garfinkel, "Behavioral and **Cognitive** Subtypes of AD-HD," J. Am. Acad. Child Adoles. Psychiatry, 28(5):739-748, 1989.

DETD Biederman, Faraone, Spencer, Wilens, Norman, Lapey, Mick, Lehman, Doyle, "Patterns of psychiatric comorbidity, **cognition**, and psychosocial functioning in adults with attention deficit hyperactivity disorder," Am. J. Psychiatry, 150:1792-1798, 1993.

DETD Cassel et al., "Serotonergic modulation of cholinergic function in the central nervous system: **cognitive** implications," Neurosci, 69:1-41, 1995.

DETD DeFrance, Schweitzer, Sands, Ginsberg, Sharma, "Age-Related Changes of **Cognitive** ERPs in Attention, 1995.

DETD Goldman-Rakic, "Topolography of **cognition**: Parallel distributed networks in primate association cortex," Annu. Rev. Neurosci., 11:137-156, 1988.

DETD Halgren and Smith, "**Cognitive** evoked potentials as modulatory processes in human memory formation and retrieval," Human Neurobiology, 6:129-139, 1987.

DETD Levin et al., "Cholinergic-dopaminergic interactions in **cognitive** performance," Behavioal Neural. Biology, 54:271-299, 1990.

DETD Lu, Shou, Tang, "Improving effect of Huperzine A on discrimination performance in aged rats and adult rats with experimental **cognitive** impairment," Chung Kuo Yao Li Hsueh Pao, 9:11-15 (article in Chinese), 1988.

DETD Pennington, Groisser, Welsh, "Contrasting **cognitive** deficits in attention deficit hyperactivity disorder versus reading disability," Dev. Psychol., 29:511-523, 1993.

DETD . . . Fattapposta, Tagliati, D'Alessio, Marciani, Foti, Amabile,

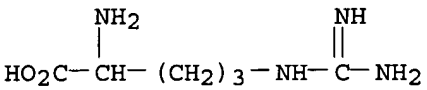
"Dopamergic pharmacological manipulations in normal humans confiirm the specificity of the visual (PERG-VEP) and **cognitive** (P300) electrophysiological alternations in Parkinson's Disease," Electroencephalography and Clinical Neurophysiology, 44:447-448, 1990.

DETD Warburton, "Nicotine as a **cognitive** enhancer," Prog. Neuropsychopharmacol. Biol. Psychiatry, 16:181-191, 1992.

DETD Weinberger et al., "Mescocortical dopaminergic function and human **cognition**," Annals New York Acad. Sci., 537:330-338, 1988.

DETD Xu, Gao, Weng, Du, Xu, Yang, Zhang, Tong, Fang, Chai et al., "Efficacy of tablet huperzine-A on memory, **cognition**, and behavior in Alzheimer's disease," Chung Kuo Yao Li Hsueh Pao, 16(5):391-395, 1995

L20 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2003 ACS
RN 7200-25-1 REGISTRY
CN **Arginine (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Arginine, DL- (8CI)
CN DL-Arginine
OTHER NAMES:
CN (.+-.)-Arginine
FS 3D CONCORD
MF C6 H14 N4 O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DETHERM*, DIOGENES, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, NAPRALERT, PHARMASEARCH, PIRA, PROMT, TOXCENTER, TULSA, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

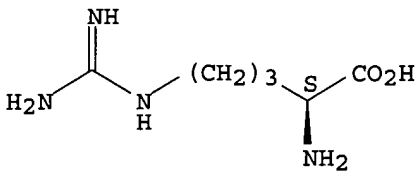


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

293 REFERENCES IN FILE CA (1957 TO DATE)
15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
293 REFERENCES IN FILE CAPLUS (1957 TO DATE)

L20 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2003 ACS
RN 74-79-3 REGISTRY
CN L-Arginine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Arginine, L- (8CI)
OTHER NAMES:
CN (S)-2-Amino-5-[(aminoiminomethyl)amino]pentanoic acid
CN **Arginine**
CN L-(+)-Arginine
CN L-.alpha.-Amino-.delta.-guanidinovaleric acid
CN L-Arg
CN L-Norvaline, 5-[(aminoiminomethyl)amino]-
CN L-Ornithine, N5-(aminoiminomethyl)-
CN Pentanoic acid, 2-amino-5-[(aminoiminomethyl)amino]-, (S)-
FS STEREOSEARCH
DR 7004-12-8, 142-49-4
MF C6 H14 N4 O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.


NH
H2N
N
H
(CH2)3
S
CO2H
NH2